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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,271	10/21/2003	Wan Gyo Jeong	SUN-0030	4943
23413 7590 12/27/2007 CANTOR COLBURN, LLP 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER				
BECKLEY, JONATHAN R				
ART UNIT		PAPER NUMBER		
4178				
MAIL DATE		DELIVERY MODE		
12/27/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/691,271

Applicant(s)

JEONG, WAN GYO

Examiner

JONATHAN R. BECKLEY

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed and received with Application No. 10/691,271 filed on 21 October 2003. Accordingly, the previous Office Action has been withdraw in view of the new ground(s) of rejection.

Drawings

2. The drawings are objected to because the applicant did not label all elements shown in the drawings where drawing elements should be provided with descriptive text labels. For example, Figure 3, element 53 should be labeled with label 'Incident Lights', etc.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1, 2, 4, 5, and 8 are rejected under 35 U.S.C. 102(e)** as being anticipated by **Bohn (U.S. Patent # 6,618,038.)**

Regarding **Claim 1**, **Bohn** teaches an optical image detector (**Column 3, lines 30-32**) that illuminates incident lights on a surface of an object to generate an image for surface morphology of the object (**Column 6, lines 21-24**), the optical image detector comprising:

a light source (**element 156; and Column 3, line 58**); and

an incident light generator receiving lights of the light source to generate at least two groups of incident lights having different incident angles with respect to the surface of the object (**Column 8, lines 1-20**).

Regarding **Claim 3, Bohn** further discloses an optical sensor that is disposed over the surface of the object to sense the lights reflected from the surface of the object, wherein the optical sensor converts an image for the surface morphology of the object into photocurrents (**Column 1, lines 15-21; and Column 2, lines 33-36**).

Regarding **Claim 4, Bohn** teaches a navigation device (**Column 13, line 8**) comprising:

a case including a lower panel having an opening (**Column 13, lines 18-20**);
a light source installed in the case (**element 156; and Column 3, line 58**); and
an incident light generator disposed to be adjacent to the light source and receiving lights of the light source to generate at least two groups of incident lights having different incident angles with respect to the surface of the object, wherein the incident lights being illuminated on the surface of the object through the opening (**Column 8, lines 1-20**).

Regarding **Claim 5, Bohn** further discloses wherein the light source is a light emitting device that generates infrared or visual spectrum rays (**Column 5, lines 52-67**)

Regarding **Claim 8, Bohn** further discloses, further comprising an optical sensor that is disposed over the opening to sense the lights reflected from the surface of the object, wherein the optical sensor converts an image for the surface morphology of the object into photocurrents (**elements 502 and 602; Column 1, lines 15-21; and Column 2, lines 33-36**)

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 2, 6, and 7 are rejected under 35 U.S.C. 103(a)** as being unpatentable over obviousness by **Bohn (U.S. Patent # 6,618,038)** in further in view of **He (US Patent Number 6,540,356)**

Regarding **Claim 2**, **Bohn** discloses a first reflecting plate reflecting the lights of the light source to generate a first group of incident lights having a first incident angle with respect to the surface of the object (**Column 11, lines 16-24**);

a second reflecting plate reflecting the lights of the light source to generate a second group of incident lights having a second incident angle greater than the first incident angle with respect to the surface of the object (**Column 11, lines 16-24**).

Bohn does not disclose a third reflecting plate reflecting the lights of the light source to generate a third group of incident lights having a third incident angle greater than the second incident angle with respect to the surface of the object.

He does disclose a third reflecting plate reflecting the lights of the light source to generate a third group of incident lights having a third incident angle greater than the second incident angle with respect to the surface of the object (**element 11; Column 3, lines 5-30; and Column 6, lines 12-16**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify **Bohn** with the teachings of **He** so to change the incident angle of the incident lights so as to superimpose with the ideal light point and to obtain the two-dimensional profile (**See Abstract**).

Regarding **Claim 6, Bohn** does disclose a first group of incident lights having a first incident angle with respect to the surface of the object (**Column 11, lines 16-39**);
a second group of incident lights having a second incident angle greater than the first incident angle with respect to the surface of the object (**Column 11, lines 16-39**).

Bohn does not disclose a third group of incident lights having a third incident angle greater than the second incident angle with respect to the surface of the object.

He does disclose a third group of incident lights having a third incident angle greater than the second incident angle with respect to the surface of the object (**Column 3, lines 5-30**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify **Bohn** with the teachings of **He** so to change the incident angle of the incident lights so as to superimpose with the ideal light point and to obtain the two-dimensional profile (**See Abstract**).

Regarding **Claim 7, Bohn** further discloses a first reflecting plate reflecting the lights of the light source to generate the first group of incident lights(**Column 11, lines**

16-24); a second reflecting plate reflecting the lights of the light source to generate the second group of incident lights (**Column 11, lines 16-24**); and

Regarding **Claim 7**, He further discloses a third reflecting plate reflecting the lights of the light source to generate the third group of incident lights (**element 11; Column 3, lines 5-30; and Column 6, lines 12-16**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan R. Beckley whose telephone number is 571-270-3432. The examiner can normally be reached on Mon-Fri: 7:30-5:00 EST (Alternate Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hai Tran can be reached on 571-272-7305. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jonathan R Beckley/
Examiner, Art Unit 4178
/J. R. B. /
Examiner, Art Unit 4178

12/18/2007

/Hai Tran/
Supervisory Patent Examiner, Art Unit 4178